

**Amendments to the Claims:**

This listing of the Claims will replace all prior listings, or versions, of the claims in the present application:

**Listing of Claims:**

**Claims 1-21 (Cancelled).**

**Claim 22 (Currently amended).** A tunable ferroelectric capacitor comprising:

a first conducting surface;

a second conducting surface, the first and second conducting surfaces comprising a capacitor ive component;

a ferroelectric material proximate the first and second conducting surfaces; and

a variable voltage line coupled to the ferroelectric material for changing a capacitance of the capacitor ive component, responsive to a changing dielectric constant of the ferroelectric material, responsive to a voltage applied to the variable voltage line;

wherein a Q of the tunable ferroelectric capacitor, when operated in a temperature range between about -50 degrees Celsius and 100 degrees Celsius, is greater than about 80 in a frequency range between 0.25 GHz and 7.0 GHz.

**Claim 23 (Previously amended):** A tunable ferroelectric capacitor as in claim 22, wherein the quality factor, when operated in a temperature range between about -50 degrees Celsius and 100 degrees Celsius, is greater than about 80 in a frequency range between about 0.8 GHz and 7.0 GHz.

**Claim 24 (Previously amended):** A tunable ferroelectric capacitor as in claim 22, wherein the quality factor, when operated in a temperature range between

about -50 degrees Celsius and 100 degrees Celsius, is greater than about 80 in a frequency range between about 0.25 GHz and 2.5 GHz

**Claim 25 (Previously amended):** A tunable ferroelectric capacitor as in claim 22, wherein the quality factor, when operated in a temperature range between about -50 degrees Celsius and 100 degrees Celsius, is greater than about 80 in a frequency range between about 0.8 GHz and 2.5 GHz.

**Claim 26 (Previously amended):** A tunable ferroelectric capacitor as in claim 22, wherein the quality factor, when operated in a temperature range between about -50 degrees Celsius and 100 degrees Celsius, is greater than about 180 in a frequency range between 0.25 GHz and 7.0 GHz.

**Claim 27 (Previously amended):** A tunable ferroelectric capacitor as in claim 22, wherein the quality factor, when operated in a temperature range between about -50 degrees Celsius and 100 degrees Celsius, is greater than about 180 in a frequency range between about 0.8 GHz and 2.5 GHz.

**Claim 28 (Previously amended):** A tunable ferroelectric capacitor as in claim 22, wherein the quality factor, when operated in a temperature range between about -50 degrees Celsius and 100 degrees Celsius, is greater than about 80 for a capacitance in a range between about 0.3 pF and 3.0 pF.

**Claim 29 (Previously amended):** A tunable ferroelectric capacitor as in claim 22, wherein the quality factor, when operated in a temperature range between about -50 degrees Celsius and 100 degrees Celsius, is greater than about 80 for a capacitance in a range between about 0.5 pF and 1.0 pF.

**Claim 30 (Previously amended):** A tunable ferroelectric capacitor as in claim 22, wherein the quality factor, when operated in a temperature range between

about -50 degrees Celsius and 100 degrees Celsius, is greater than about 180 for a capacitance in a range between about 0.3 pF and 3.0 pF.

**Claim 31 (Previously amended):** A tunable ferroelectric capacitor as in claim 22, wherein the quality factor, when operated in a temperature range between about -50 degrees Celsius and 100 degrees Celsius, is greater than about 180 for a capacitance in a range between about 0.5 pF and 1.0 pF.

**Claim 32 (Currently amended):** A tunable ferroelectric capacitor as claimed in claim 22, wherein the capacitor has a capacitance of about 0.8 to 1.5 pF when zero voltage is applied to the ferroelectric material.

**Claim 33 (Currently amended):** A tunable ferroelectric capacitor as claimed in claim 22, wherein the ferroelectric material comprises barium strontium titanate.

**Claim 34 (Currently amended):** A tunable ferroelectric capacitor as claimed in claim 22, wherein the ferroelectric material comprises a film having a thickness of approximately one micron.

**Claim 35 (Currently amended):** A tunable ferroelectric capacitor as claimed in claim 22, wherein the capacitor is a microstrip gap capacitor.

**Claim 36 (Currently amended):** A tunable ferroelectric capacitor as claimed in claim 22, wherein the first conducting surface and the second conducting surface are separated by a gap approximately 2.5 microns wide.

**Claim 37 (Currently amended):** A tunable ferroelectric capacitor as claimed in claim 22, wherein the conductors are metal strips having a thickness in the range of 2-3 microns.

**Claim 38 (Currently amended):** A tunable ferroelectric capacitor as claimed in claim 22, wherein the capacitor is an overlay capacitor.

**Claim 39 (Currently amended):** A tunable ferroelectric capacitor as claimed in claim 22, wherein the second conducting surface comprises either gold or silver.

**Claim 40 (Currently amended):** A tunable ferroelectric capacitor as claimed in claim 22, wherein:

    a first taper to the tunable ferroelectric capacitor from a ferroelectric capacitor bond pad comprises a contraction of the first conducting surface from about 4.0 mils wide to about 0.1 mils wide over a distance of about 1.0 mils; and

    a second taper from the tunable ferroelectric capacitor to a DC bias pad region comprises an expansion of the second conducting surface from about 0.1 mils wide to about 4.0 mils wide over a distance of about 1.0 mils.

**Claim 41 (Cancelled).**